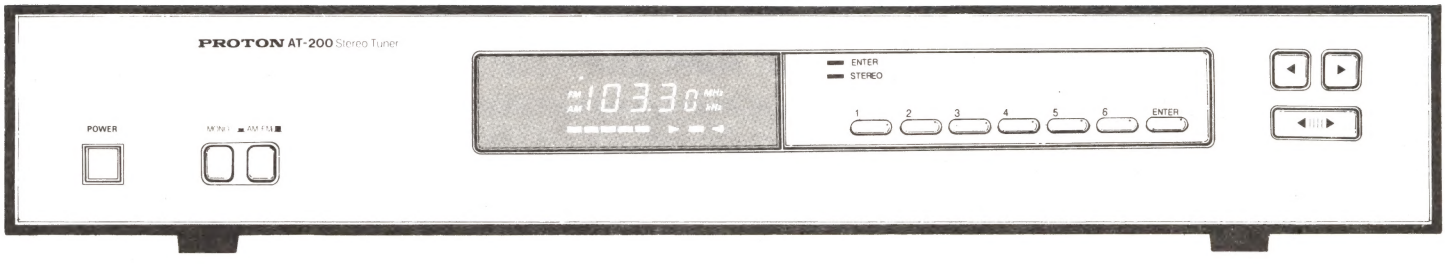
PROTON SERVICE MANUAL

AT-200

STEREO TUNER



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SPECIFICATION

FM TUNER SECTION:

1. Usable sensitivity: (300 Ω)		1.8uV
2. 50dB quieting sensitivity:	Mono/Stereo:	3.2uV/40uV
3. THD @ 65dBf:	Mono/Stereo 100Hz:	0.2%/0.3%
	Mono/Stereo 1 kHz:	0.1%/0.2%
	Mono/Stereo 10kHz:	0.2%/0.3%
4. S/N ratio (A weighted, at 65dBf):	Mono/Stereo:	83dB/74dB
5. HUM and noise @ 65dBf:	Mono/Stereo:	75dB/70dB
6. De-emphasis accuracy:	50us:	±0.5dB
	75us:	±0.5dB
7. Capture ratio @ 45dBf:		1.5dB
8. Alternated channel selectivity @ 45dBf:		65dB
9. Spurious response 1/2 IF:		85dB
10. Image rejection:		70dB
11. IF rejection:		90dB
12. AM suppression @ 65dBf:		60dB
13. Stereo seperation:	100Hz:	40dB
	1 kHz:	45dB
	10 kHz:	40dB

AM TUNER SECTION:

1. Usable sensitivity:	25uV
2. Selectivity:	35dB
3. Image rejection:	35dB
4. IF rejection:	50dB
5. AGC:	50dB
6. T.H.D. 400Hz 30% modulation @ 10mV/m:	0.5%
7. Audio bandwidth:	40-3k2Hz
8. S/N @ 10mV/m:	43dB
9. 2nd & 3rd tweet:	3%

ALIGNMENT

1. FM ALIGNMENT: a. SELECTOR SWITCH AT FM POSITION
   b. AC LINE VOLTAGE AT RATED VOLTAGE
   c. MONITOR OUTPUT AT REC OUT

SECTION		FM	SG		DIAL SETTING	INDICATOR	ADJUSTMENT	ADJUST FOR
		CONNECTION	CARRIER	MOD				
THD	1		98MHz	100% MOD 1KHz	98MHz	DIGITAL VOLTAGE METER	IFT 101 A UP SIDE CORE	PIN TP2 TO TP2 VOLTAGE 0±0.05V
	2					THD METER	LFT 101 B DOWN SIDE CORE	MINIMUM THD
	3		REPEAT STEP1 AND 2			DIGITAL VOLTAGE METER	L004	PIN TP1 TUNING VOLTAGE 4.3±0.1V
RF	1	CONNECT TO FM 300 OHM ANTENNA TERMINAL ON THE REAL PANEL THROUGH FM ANTENA	90MHz	100% MOD 400Hz	90MHz			
	2		106MHz		106MHz		TC004	PIN TP1 TUNING VOLTAGE 18.7±0.2V
	3		REPEAT STEP 1 AND 2					
SENS	1		90MHz	100% MOD 400Hz	90MHz	VTVM & OSCILLOSCOPE	L001	MAXMIMUM OUTPUT
	2		106MHz		106MHz		TC003	
	3		98MHz		98MHz		IFT001	
	4		REPEAT STEP 1.2 AND 3					
AUTO STOP LEVEL			98MHz ANT. INPUT LEVEL 17dB	100% MOD 400Hz	98MHz	VTVM & OSCILLOSCOPE	VR102	LOCK LED JUST LIGHT

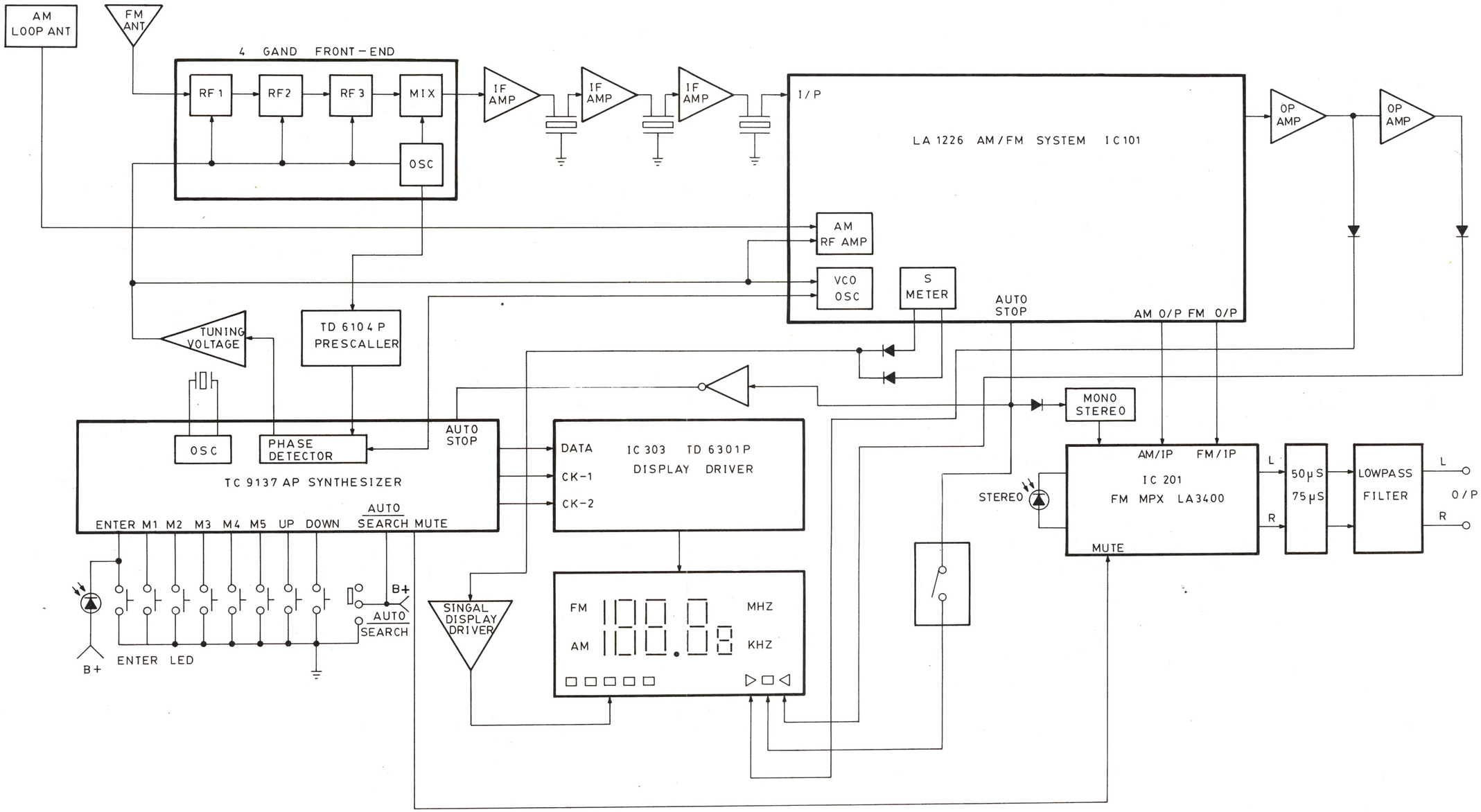
2. FM MPX ALIGNMENT: a. SELECTOR SWITCH AT FM POSITION
   b. AC LINE VOLTAGE AT RATED VOLTAGE
   c. MONITOR OUTPUT AT REC OUT
   SG AND CONNECTED TO FM 300 OHM ANTENNA TERMINAL ON THE REAR PANEL THROUGH FM DUMMY ANTENNA

SEPERATION	1	98MHz	10% 19KHz (PILOT) L ONLY	98MHz	VTVM & OSCILLOSCOPE TO R TUNER OUT	VR201	MINIMUM OUTPUT
	2		10% 19KHz (PILOT) R ONLY	98MHz	VTVM & OSCILLOSCOPE TO L TUNER OUT	VR201	
	3		REPEAT STEP 1 AND 2				

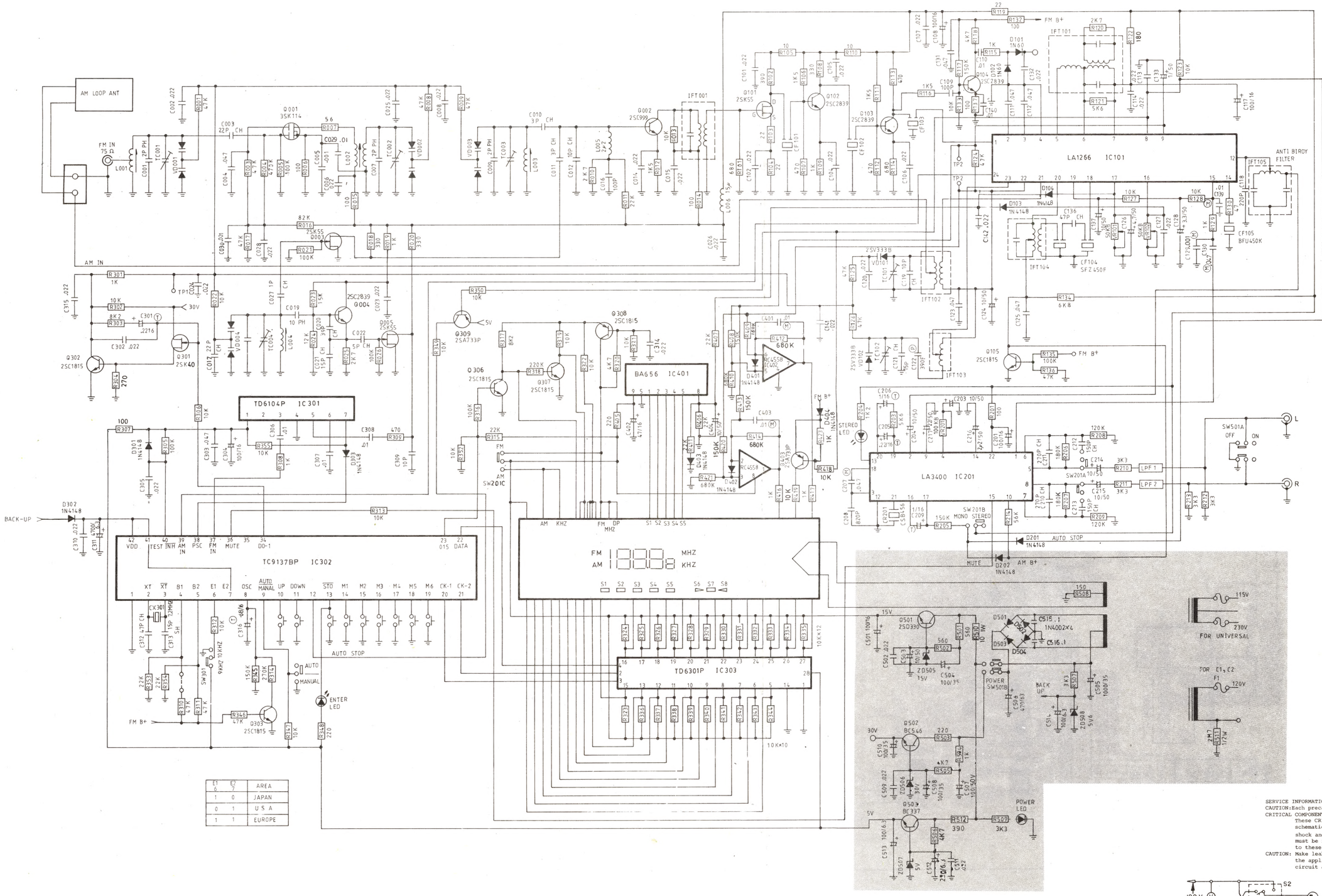
3. AM ALIGMNENT

SECTION		AM SG			DIAL SETTING	INDICATOR	ADJUSTMENT	ADJUST FOR
		CONNECTION	CARRIER	MOD				
AM IF		HOT SIDE OF SG OUTPUT THROUGH 200PF TO AM ANT	450KHz	30% MOD	POINT OF NON-INTERFERENCE	VTVM & OSCILLOSCOPE	IFT104	MAXIMUM OUTPUT
AM RANGE	1	HOT SIDE OF SG OUTPUT THROUGH A IOOPANT RADIATE TO AM ANT BAR VERTICALLY AND KEEP 60cm DISTANCE	600KHz	30% MOD 400Hz	600KHz	DIGITAL VOLTAGE METER	IFT103	TUNING VOLTAGE 4.5V±0.2V
	2		1400KHz	30% MOD 400Hz	1400KHz		TC102	TUNING VOLTAGE 20.5V±0.2V
	3		REPEAT STEP 1 AND STEP 2					
AM SENS	1		600KHz	30% MOD 400Hz	600KHz	VTVM & OSCILLOSCOPE	IFT102	MAXIMUM OUTPUT
	2		1400KHz	30% MOD 400Hz	1400KHz		TC101	
	3		REPEAT STEP 1 AND STEP 2					
SIGNAL STRENGTH INDICATOR			1000KHz SG OUTPUT LEVEL 126dB	30% MOD 400Hz	1000KHz	VTVM & OSCILLOSCOPE	VR101	THE 5th LED JUST DARK

BLAOCK DIAGRAM



CIRCUIT DIAGRAM



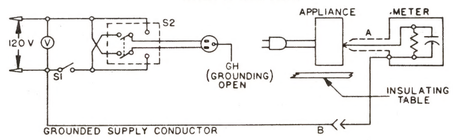
E1 6	E2 7	AREA
1	0	JAPAN
0	1	U S A
1	1	EUROPE

SERVICE INFORMATION

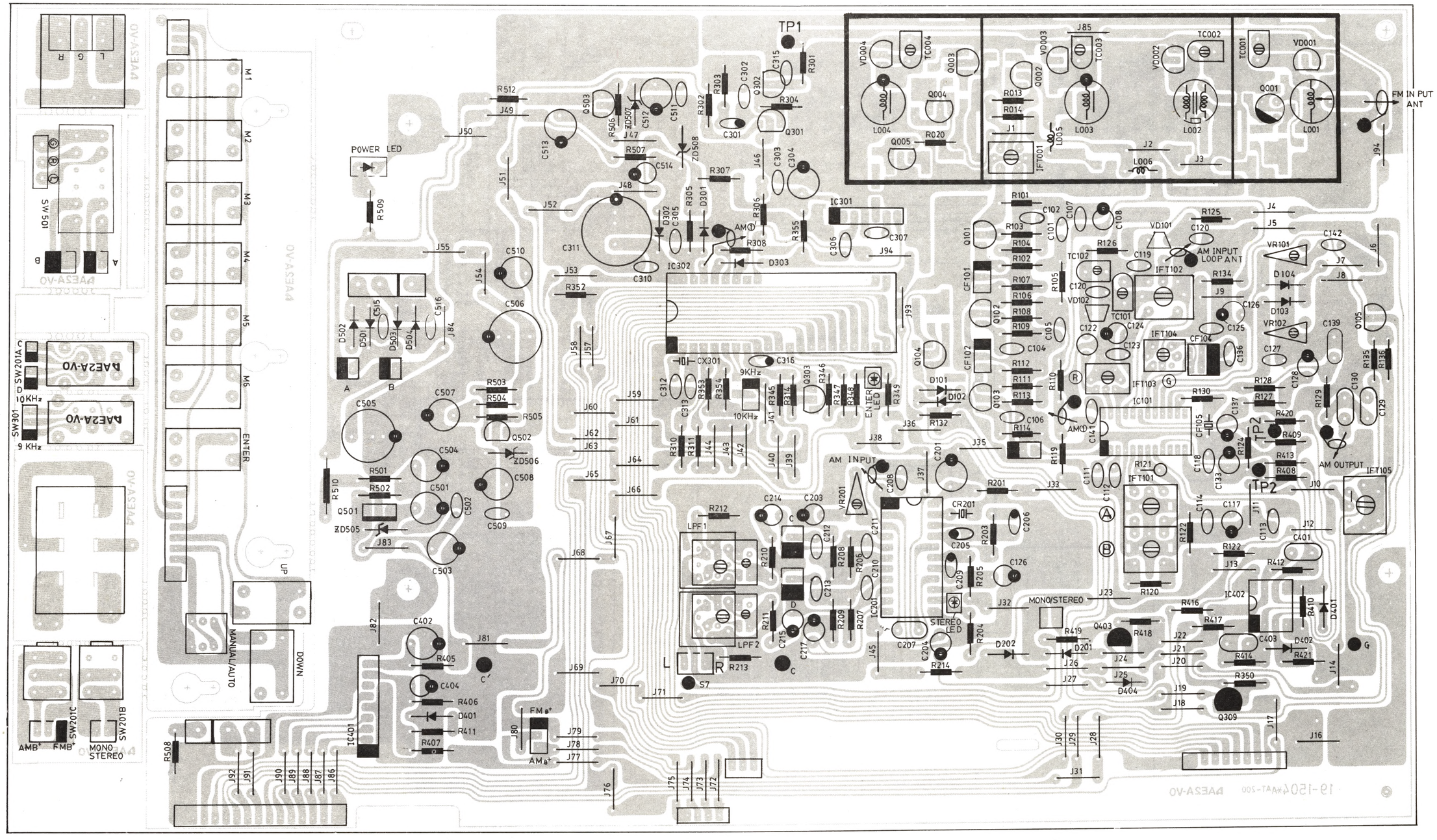
CAUTION: Each precaution to be followed during servicing.

CRITICAL COMPONENT WARNING:
These CRITICAL COMPONENTS that are shaded of the schematic diagram are used to prevent electric shock and fire hazard. All these special components must be replaced only with the same type identical to these in the schematic diagram.

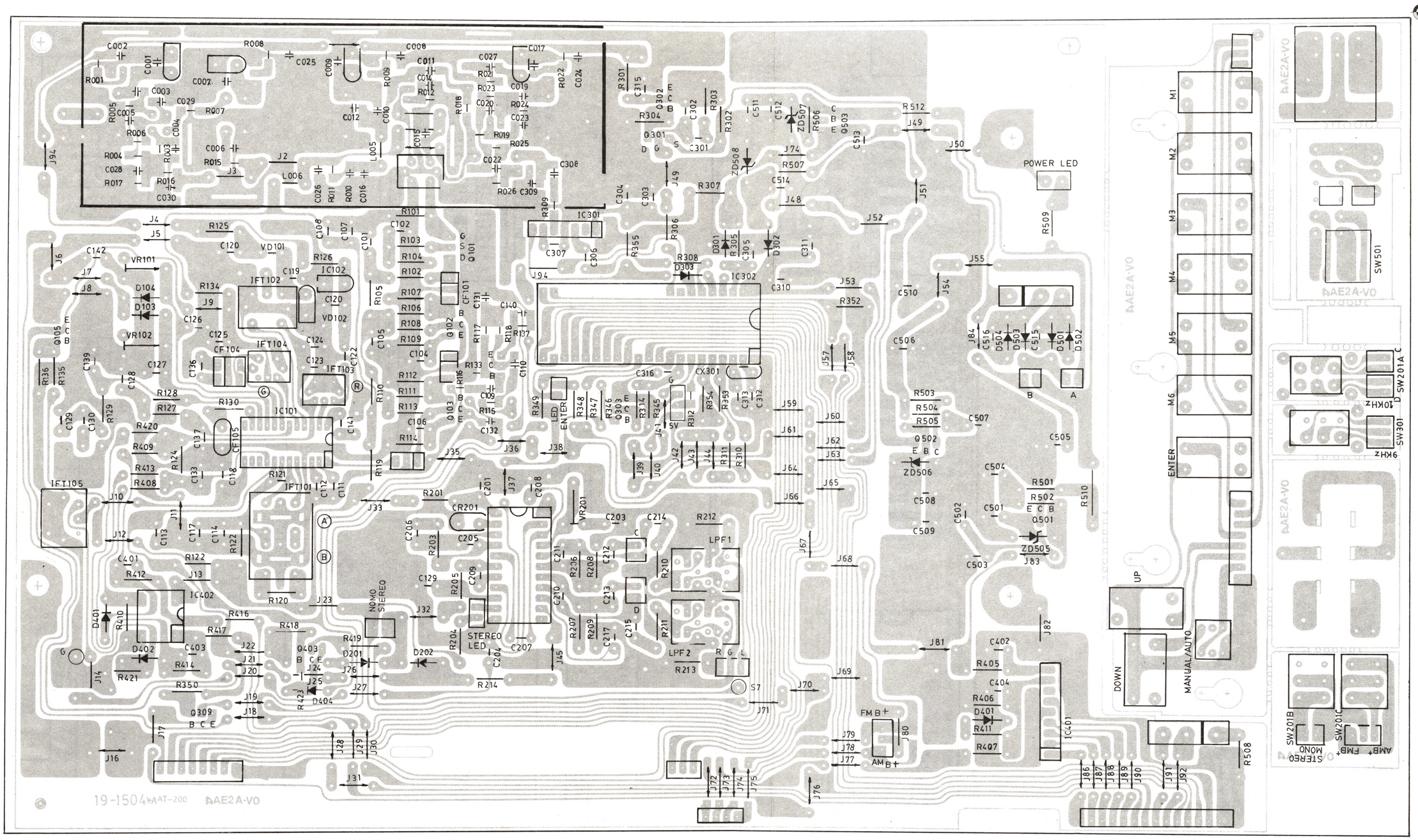
CAUTION: Make leakage current measurement before returning the appliance to the customer. See measurement circuit as shown below.



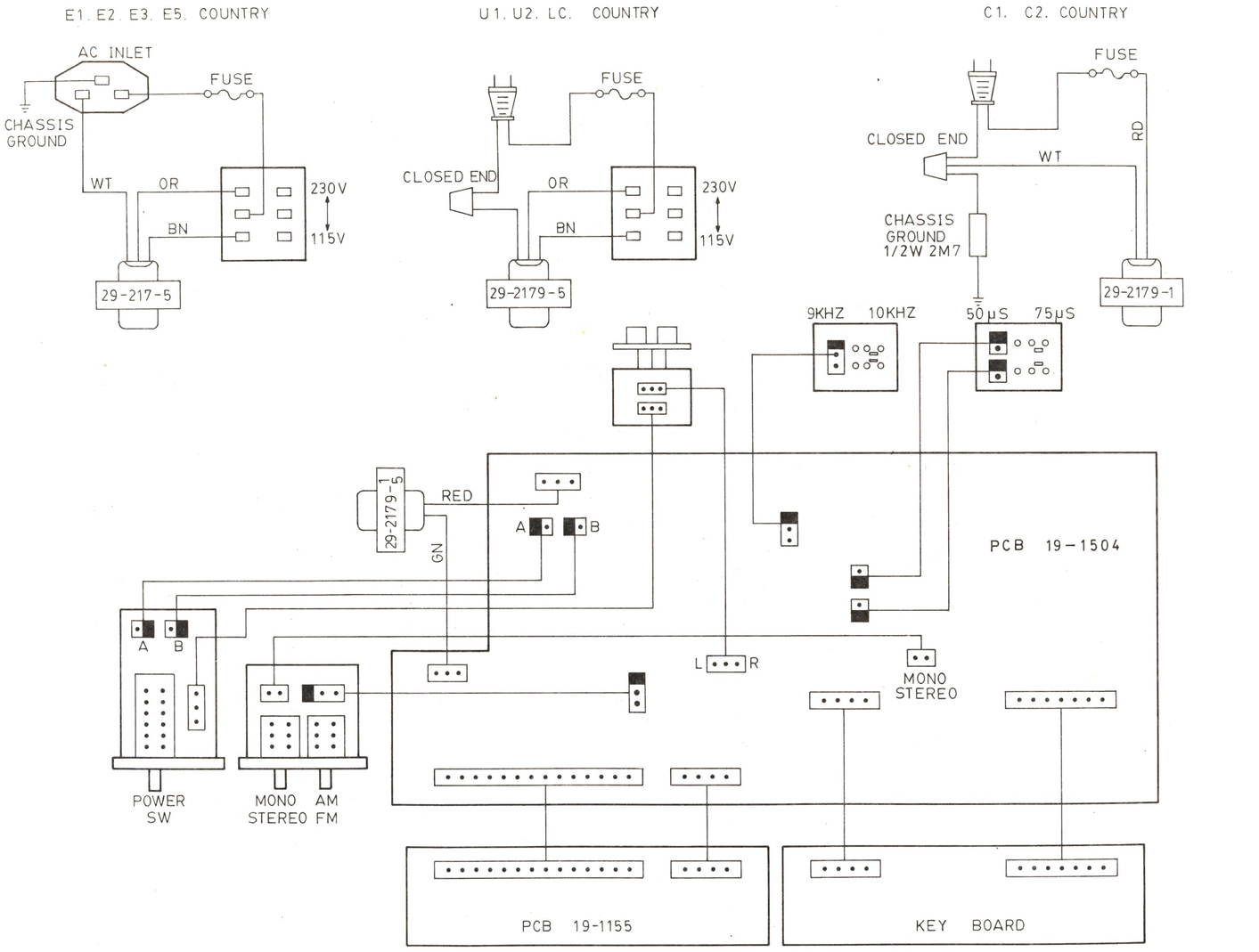
PCB PARTS LOCATION (TOP VIEW)



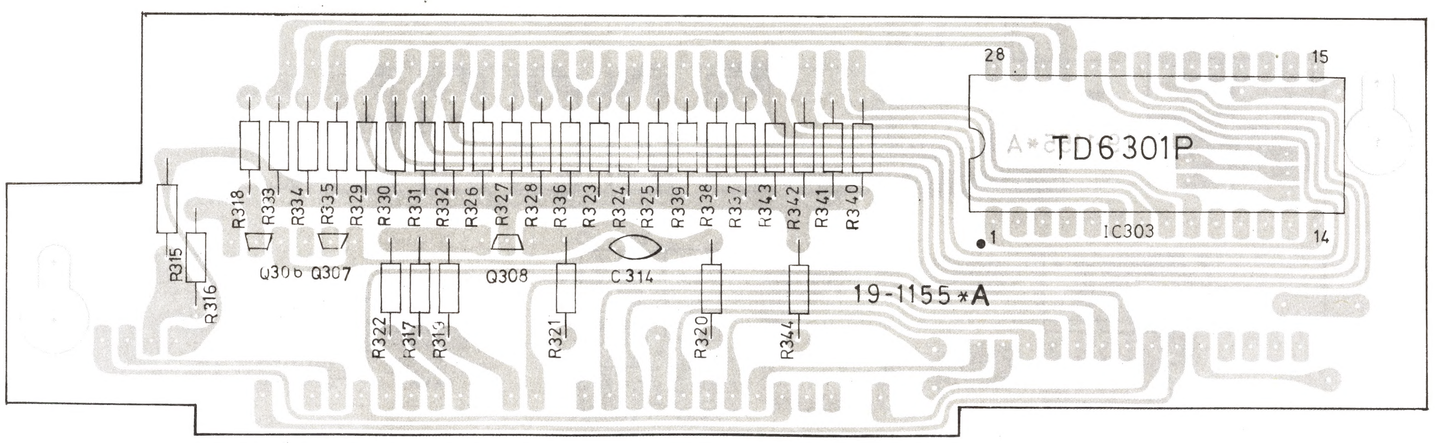
PCB PARTS LOCATION (BOTTON VIEW)



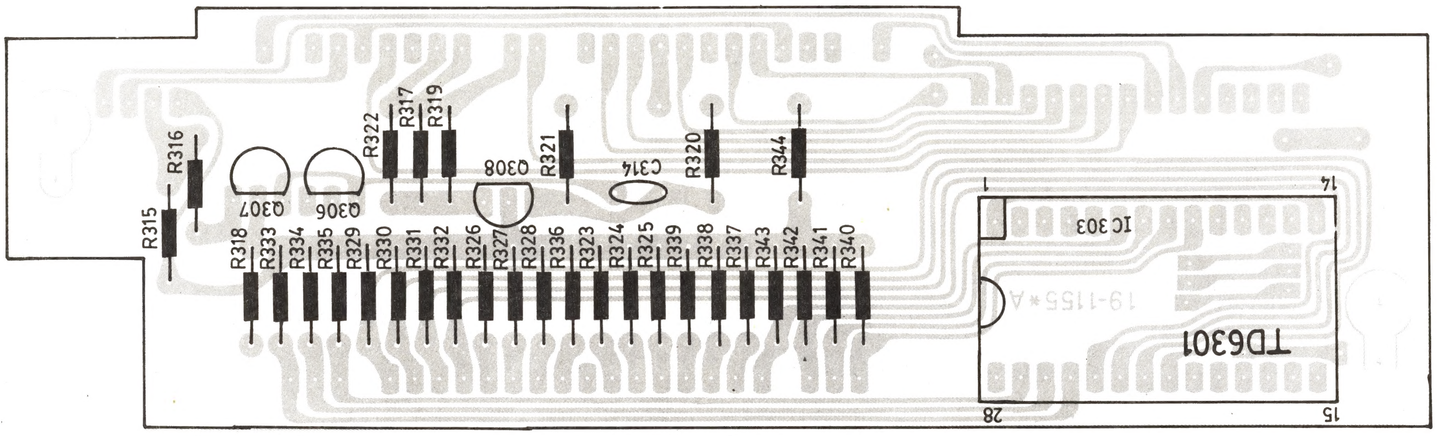
WIRING DIAGRAM



PCB PARTS LOCATION (TOP VIEW)



(BOTTON VIEW)



ELECTRICAL PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION
RESISTORS		
R001	16-1/8TY473J	RES CHIP 1/8W 47K OHM +-5%
R003	16-1/8TY473J	RES CHIP 1/8W 47K OHM +-5%
R004	16-1/8TY474J	RES CHIP 1/8W 470K OHM +-5%
R005	16-1/8TY104J	RES CHIP 1/8W 100K OHM +-5%
R006	16-1/8TY101J	RES CHIP 1/8W 100 OHM +-5%
R007	16-1/8TY560J	RES CHIP 1/8W 56 OHM +-5%
R008-R009	16-1/8TY473J	RES CHIP 1/8W 47K OHM +-5%
R010	16-1/8TY272J	RES CHIP 1/8W 2K7 OHM +-5%
R011	16-1/8TY223J	RES CHIP 1/8W 22K OHM +-5%
R012	16-1/8TY152J	RES CHIP 1/8W 1K5 OHM +-5%
R013	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R014	16-1/4CA101J	RES C A 1/4W 100 OHM +-5%
R015	16-1/8TY101J	RES CHIP 1/8W 100 OHM +-5%
R016	16-1/8TY823J	RES CHIP 1/8W 82K OHM +-5%
R017	16-1/8TY473J	RES CHIP 1/8W 47K OHM +-5%
R018	16-1/4CA331J	RES C A 1/4W 330 OHM +-5%
R019	16-1/8TY102J	RES CHIP 1/8W 1K OHM +-5%
R020	16-1/8TY331J	RES CHIP 1/8W 330 OHM +-5%
R021	16-1/8TY104J	RES CHIP 1/8W 100K OHM +-5%
R022	16-1/8TY103J	RES CHIP 1/8W 10K OHM +-5%
R023	16-1/8TY153J	RES CHIP 1/8W 15K OHM +-5%
R024	16-1/8TY123J	RES CHIP 1/8W 12K OHM +-5%
R025	16-1/8TY272J	RES CHIP 1/8W 2K7 OHM +-5%
R026	16-1/8TY104J	RES CHIP 1/8W 100K OHM +-5%
R101	16-1/4CA681J	RES C A 1/4W 680 OHM +-5%
R102	16-1/4CA391J	RES C A 1/4W 390 OHM +-5%
R103-R104	16-1/4CA220J	RES C A 1/4W 22 OHM +-5%
R105	16-1/4CA100J	RES C A 1/4W 10 OHM +-5%
R106	16-1/4CA152J	RES C A 1/4W 1K5 OHM +-5%
R107	16-1/4CA471J	RES C A 1/4W 470 OHM +-5%
R108	16-1/4CA331J	RES C A 1/4W 330 OHM +-5%
R109	16-1/4CA102J	RES C A 1/4W 1K OHM +-5%
R110	16-1/4CA100J	RES C A 1/4W 10 OHM +-5%
R111	16-1/4CA152J	RES C A 1/4W 1K5 OHM +-5%
R112-R113	16-1/4CA471J	RES C A 1/4W 470 OHM +-5%
R114	16-1/4CA681J	RES C A 1/4W 680 OHM +-5%
R115	16-1/8TY102J	RES CHIP 1/8W 1K OHM +-5%
R116	16-1/8TY152J	RES CHIP 1/8W 1K5 OHM +-5%
R117	16-1/8TY154J	RES CHIP 1/8W 150K OHM +-5%
R118	16-1/8TY472J	RES CHIP 1/8W 4K7 OHM +-5%
R119	16-1/4AN220J	RES MO SMH 22 OHM +-5%
R120	16-1/4CA272J	RES C A 1/4W 2K7 OHM +-5%
R121	16-1/4CR562J	RES C R 1/4W 5K6 OHM +-5%
R122	16-1/4CA181J	RES C A 1/4W 180 OHM +-5%
R123	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R124-R126	16-1/4CA473J	RES C A 1/4W 47K OHM +-5%
R127-R128	16-1/4CA103J	RES C A 1/8W 10K OHM +-5%
R129	16-1/4CA102J	RES C A 1/4W 1K OHM +-5%
R130	16-1/4CA470J	RES C A 1/4W 47 OHM +-5%
R132	16-1/4CA101J	RES C A 1/4W 100 OHM +-5%
R133	16-1/8TY103J	RES CHIP 1/8W 10K OHM +-5%
R134	16-1/4CA682J	RES C A 1/4W 6K8 OHM +-5%
R135	16-1/4CA104J	RES C A 1/4W 100K OHM +-5%
R136	16-1/4CA473J	RES C A 1/4W 47K OHM +-5%
R137	16-1/8TY101J	RES CHIP 1/8W 100 OHM +-5%
R201	16-1/4CA101J	RES C A 1/4W 100 OHM +-5%
R203	16-1/4CA562J	RES C A 1/4W 5K6 OHM +-5%
R204	16-1/4CA122J	RES C A 1/4W 1K2 OHM +-5%
R205	16-1/4CA152J	RES C A 1/4W 150K OHM +-5%
R206-R207	16-1/4CA184J	RES C A 1/4W 180K OHM +-5%
R208-R209	16-1/4CA124J	RES C A 1/4W 120K OHM +-5%
R210-R213	16-1/4CA332J	RES C A 1/4W 3K3 OHM +-5%
R214	16-1/4CA563J	RES C A 1/4W 56K OHM +-5%
R301	16-1/4CA102J	RES C A 1/4W 1K OHM +-5%
R302	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%

ref. no.	PARTS NO.	DESCRIPTION
RESISTORS		
R303	16-1/4CA822J	RES C A 1/4W 8K2 OHM +-5%
R304	16-1/4CA271J	RES C A 1/4W 270 OHM +-5%
R305	16-1/4CA104J	RES C A 1/4W 100K OHM +-5%
R306	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R307	16-1/4CA101J	RES C A 1/4W 100 OHM +-5%
R308	16-1/4CA102J	RES C A 1/4W 1K OHM +-5%
R309	16-1/4CA471J	RES C A 1/4W 470 OHM +-5%
R310-R311	16-1/4CA473J	RES C A 1/4W 47K OHM +-5%
R312	16-1/8TY103J	RES CHIP 1/4W 10K OHM +-5%
R313	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R314	16-1/4CA274J	RES C A 1/4W 270K OHM +-5%
R315	16-1/4CA222J	RES C A 1/4W 22K OHM +-5%
R316	16-1/4CA104J	RES C A 1/4W 100K OHM +-5%
R317	16-1/4CA822J	RES C A 1/4W 8K2 OHM +-5%
R318	16-1/4CA224J	RES C A 1/4W 220K OHM +-5%
R319	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R320	16-1/4CA472J	RES C A 1/4W 4K7 OHM +-5%
R321-R344	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R345	16-1/4CA154J	RES C A 1/4W 150K OHM +-5%
R346	16-1/4CA473J	RES C A 1/4W 47K OHM +-5%
R347	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R348	16-1/4CA221J	RES C A 1/4W 220 OHM +-5%
R349-R350	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R352	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R353-R354	16-1/4CA223J	RES C A 1/4W 22K OHM +-5%
R405-R407	16-1/4CA223J	RES C A 1/4W 22K OHM +-5%
R408	16-1/4CA154J	RES C A 1/4W 150K OHM +-5%
R409	16-1/4CA154J	RES C A 1/4W 150K OHM +-5%
R410	16-1/4CA684J	RES C A 1/4W 680K OHM +-5%
R411	16-1/4CA223J	RES C A 1/4W 22K OHM +-5%
R412	16-1/4CA684J	RES C A 1/4W 680K OHM +-5%
R413	16-1/4CA154J	RES C A 1/4W 150K OHM +-5%
R414	16-1/4CA684J	RES C A 1/4W 680K OHM +-5%
R416-R417	16-1/4CA102J	RES C A 1/4W 1K OHM +-5%
R418	16-1/4CA103J	RES C A 1/4W 10K OHM +-5%
R420	16-1/4CA154J	RES C A 1/4W 150K OHM +-5%
R421	16-1/4CA684J	RES C A 1/4W 680K OHM +-5%
R423	16-1/8TY102J	RES CHIP 1/8W 1K OHM +-5%
R501-R502	16-1/4CA561J	RES C A 1/4W 560 OHM +-5%
R503	16-1/4CA221J	RES C A 1/4W 220 OHM +-5%
R504	16-1/4CA102J	RES C A 1/4W 1K OHM +-5%
R505	16-1/4CA472J	RES C A 1/4W 4K7 OHM +-5%
R506	16-1/4CA472J	RES C A 1/4W 4K7 OHM +-5%
R507	16-1/4CA332J	RES C A 1/4W 3K3 OHM +-5%
R508	16-1/4CA151J	RES C A 1/4W 150 OHM +-5%
R509	16-1/4CA332J	RES C A 1/4W 3K3 OHM +-5%
R510	16-1AN100J	RES M O SMM 1W 10 OHM +-5%
R511-R311	16-1/2CP275J	RES C 1/2W 2M7 OHM +-5%
R512	16-1/4AN391J	RES M O SMM 1/4W 390 OHM +-5%
CAPACITORS		
C001	17-5KY2RODPH	CAP CHIP 2PF 50V +-0.5PF PH
C002	17-5KY223M	CAP CHIP 0.022UF 50V +-20%
C003	17-5KY220JCH	CAP CHIP 22PF 50V +-5% CH
C004	17-5KY473M	CAP CHIP 0.047UF 50V +-20%
C005	17-5KY102K	CAP CHIP 1000PF 50V +-10%
C006	17-5KY223M	CAP CHIP 0.022UF 50V +-20%
C007	17-5KY2RODPH	CAP CHIP 2PF 50V +-0.5PF PH
C008	17-5KY223M	CAP CHIP 0.022UF 50V +-20%
C009	17-5KY2RODPH	CAP CHIP 2PF 50V +-0.5%PF PF
C010-C011	17-5KY3RODCH	CAP CHIP 3PF 50V +-0.5%PF CH
C012	17-5KY100JCH	CAP CHIP 10PF 50V +-5% CH
C014-C015	17-5KY223M	CAP CHIP 0.022UF 50V +-20%
C016	17-5KY101J	CAP CHIP 100PF 50V +-5% SL
C017	17-5KY220JCH	CAP CHIP 22PF 50V +-5% CH
C019	17-5KY100JPH	CAP CHIP 10PF 50V +-5% PH
C020	17-5KY390JCH	CAP CHIP 39PF 50V +-5% CH

CAPACITORS				
C021	17-5KY150JCH	CAP CHIP 15PF	50V	+-5% CH
C022	17-5KY5RODCH	CAP CHIP 5PF	50V	+-0.5PF +-20%
C023-C024	17-5KY223M	CAP CHIP 0.022UF	50V	+-20%
C025	17-5KY223M	CAP CHIP 0.022UF	50V	+-20%
C026	17-5KY1RODCH	CAP CHIP 1PF	50V	+-0.5PF CH
C028	17-5KY223M	CAP CHIP 0.022UF	50V	+-20%
C029	17-5KY103M	CAP CHIP 0.01UF	50V	+-20%
C030	17-5KY102K	CAP CHIP 0.001UF	50V	+-10%
C101-C107	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C108	17-1.6ER107M	CAP EL R 100UF	16V	+-20%
C109	17-5KY101JSL	CAP CHIP 100PF	50V	+-5% SL
C110	17-5KY103M	CAP CHIP 0.01UF	50V	+-20%
C111-C112	17-5DR473M	CAP CER 0.047UF	50V	+-20%
C113-C114	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C117	17-1.6ER107M	CAP EL R 100UF	16V	+-20%
C118	17-5DR221K	CAP CER R 220PF	50V	+-10%
C119	17-5DR100FCH	CAP CER R 10PF	50V	+-1PF CH
C120	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C121	17-5DR150JCH	CAP CER R 15PF	50V	+-5% CH
C122	17-5U391J	CAP P S 390PF	50V	+-5%
C123	17-5DR473M	CAP CER R 0.047UF	50V	+-20%
C124	17-5ER106M	CAP EL R 10UF	50V	+-20%
C125	17-5DR473M	CAP CER R 0.047UF	50V	+-20%
C126	17-5ER475M	CAP EL R 4.7UF	50V	+-20%
C127	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C128	17-5ER335M	CAP EL R 3.3UF	50V	+-20%
C129	17-5FR102J	CAP MY R 1000PF	50V	+-5%
C130	17-5FR473J	CAP MY R 1000PF	50V	+-5%
C131	17-5KY473M	CAP CHIP 0.47UF	50V	+-20%
C132	17-5KY223M	CAP CHIP 0.022UF	50V	+-20%
C136	17-5DR470JCH	CAP CER R 470PF	50V	+-5% CH
C137	17-5ER106M	CAP EL R 10UF	50V	+-20%
C139	17-5FR103J	CAP MY R 0.01UF	50V	+-5%
C140	17-5KY103M	CAP CHIP 0.01UF	50V	+-20%
C142	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C201	17-1.6ER107M	CAP EL R 100UF	16V	+-20%
C203-C204	17-5ER106M	CAP EL R 10UF	50V	+-20%
C205	17-1.6OF224M	CAP TAS 0.22UF	16V	+-20%
C206	17-1.6OF105M	CAP TAS 1UF	16V	+-20%
C207	17-5FR473M	CAP MY R 0.047UF	50V	+-5%
C208	17-5DR821M	CAP CER R 820PF	50V	+-20%
C209	17-1.6OF105M	CAP TAS 1UF	16V	+-20%
C210-C211	17-5DR271JCH	CAP CER R 270PF	50V	+-5% CH
C212-C213	17-5DR151JCH	CAP CER R 150PF	50V	+-5% CH
C214-C215	17-5ER106M	CAP EL R 10UF	50V	+-20%
C216	17-5ER225M	CAP EL R 2.2UF	50V	+-20%
C217	17-1.6EF226M	CAP TAS 22UF	16V	+-20%
C301	17-1.6OF224M	CAP TAS 0.22UF	16V	+-20%
C302	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C303	17-5DR473M	CAP CER R 0.047UF	50V	+-20%
C304	17-1.6ER107M	CAP EL R 100UF	16V	+-20%
C305	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C306-C307	17-5DR103M	CAP CER R 0.01UF	50V	+-20%
C308	17-5KY103M	CAP CHIP 0.01UF	50V	+-20%
C309	17-5KY100DCH	CAP CHIP 10PF	50V	+-0.5%
C310	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C311	17-0.63ER478M	CAP EL R 4700UF	50V	+-20%
C312	17-5DR470JCH	CAP CER R 47PF	50V	+-5% CH
C313	17-5DR150JCH	CAP CER R 15PF	50V	+-5% CH
C314	17-50F223M	CAP CER SM 0.022UF	50V	+-20%
C316	17-5ER105M	CAP CER R 1UF	50V	+-20%
C401	17-5FR103J	CAP MY R 0.01UF	50V	+-5%
C402	17-1.6ER476M	CAP MY R 0.01UF	50V	+-5%
C403	17-5FR103M	CAP MY R 0.01UF	50V	+-5%
C404	17-5ER106M	CAP EL R 10UF	50V	+-20%
C501	17-1.6ER107M	CAP EL R 100UF	16V	+-20%

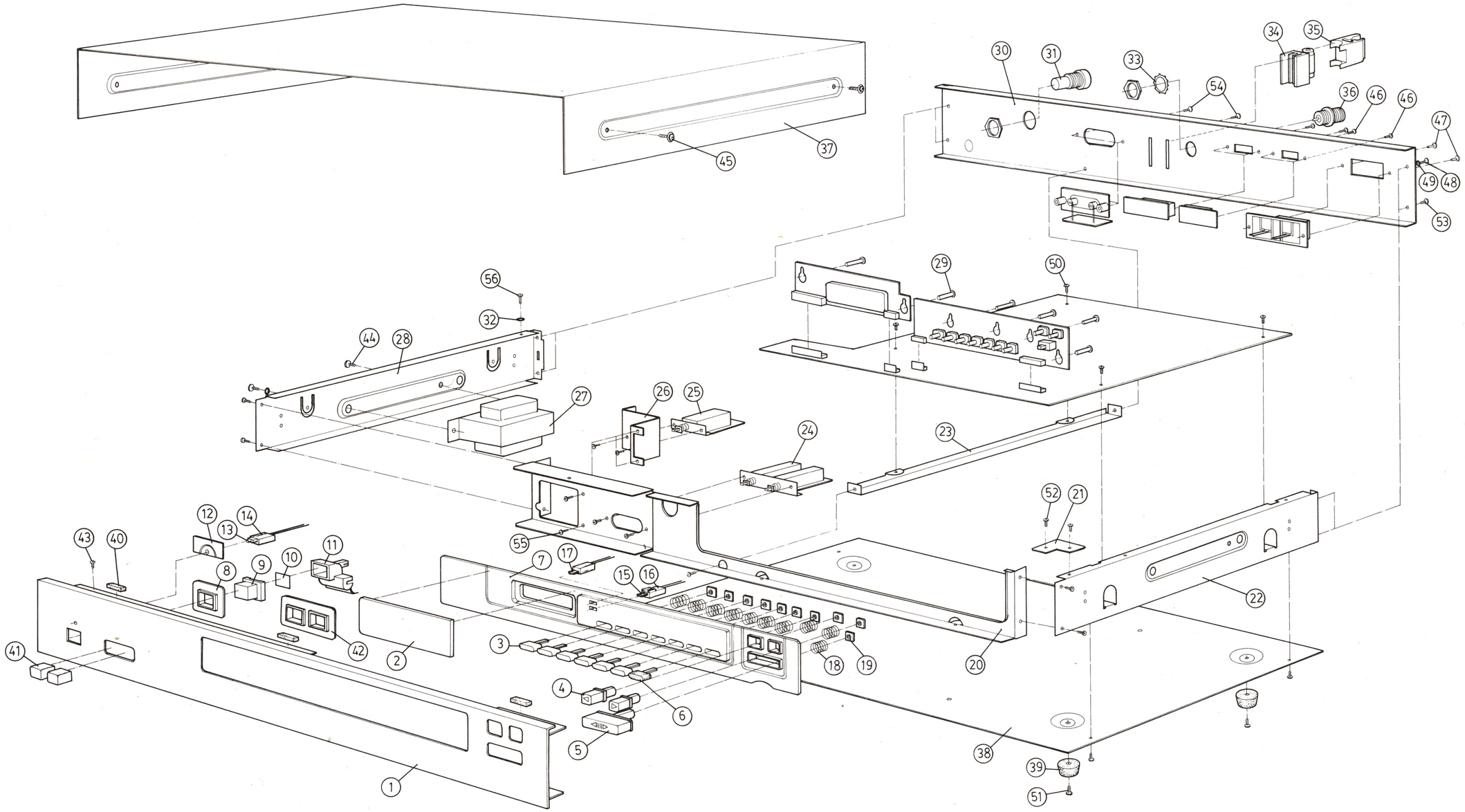
CAPACITORS				
C502	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C503	17-5ER106M	CAP EL SM 10UF	50V	+-20%
C504	17-3.5EF107M	CAP EL SM 100UF	35V	+-20%
C505	17-3.5EF108M	CAP EL SM 1000UF	35V	+-20%
C506	17-6.3EF477M	CAP EL SM 470UF	63V	+-20%
C507-C508	17-3.5EF107M	CAP EL SM 100UF	35V	+-20%
C509	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C510	17-3.5EF107M	CAP CER SM 100UF	35V	+-20%
C511	17-5DR223M	CAP CER R 0.022UF	50V	+-20%
C512	17-0.63ER227M	CAP EL R 220UF	6.3V	+-20%
C513-C514	17-0.63ER107M	CAP EL R 100UF	6.3V	+-20%
C515-C516	17-2.5DR104M	CAP CER R 0.1UF	25V	+-20%
DIODES				
D101-D102	30-1010	DIODE IN60		
D103-D104	30-1152TA	DIODE IN4148 A-TYPE		
D201-D202	30-1152TA	DIODE IN4148 A-TYPE		
D301-D303	30-1152TA	DIODE IN4148 A-TYPE		
D401-D404	30-1152TA	DIODE IN4148 A-TYPE		
D501-D504	30-1002	DIODE RECTI 100V 1A IN4002/ID01		
ZD505	30-1044-1TA	DIODE ZENER HZ15-2 26MM		
ZD506	30-1147-1TA	DIODE ZENER HZ30-2 26MM		
ZD507	30-1058-1TA	DIODE ZENER HZ5C-3 26MM		
ZD508	30-1259	DIODE ZENER RD5.6EB3		
VARIABLE RESISTORS				
VR101-VR102	VR01-F08503B	SEMI-FIX 8O 50KB FLAT		
VR201	VR03-F08104B	SEMI-FIX 8O 100KB FLAT		
TC001-TC004	17-1040	CAP TRIM CER ECR-HA010A11A		
TC101-TC102	17-1040	CAP TRIM CER ECR-HA010A11A		
VD001-VD004	30-1082*A	DIODE VARI CAP BB204B		
VD101-VD102	30-1146	DIODE VARI CAP SVC333B		
TRANSISTORS				
Q001	30-2379	FET MOS 3SK114-O		
Q002	30-2239-1	TR 2SC999		
Q003	30-2298	FET 2SK55		
Q004	30-2298	TR 2SK55		
Q005	30-2298	FET 2SK55		
Q101	30-2298	FET 2SK55		
Q102-Q104	30-2406	TR 2SC2839		
Q105	30-2156	TR 2SC1815GR N 100MA 40V		
Q301	30-2161	FET 2SK40		
Q302-Q303	30-2156	TR 2SC1815GR		
Q306-Q308	30-2156	TR 2SC1815GR		
Q309	30-2171	TR 2SA733P		
Q403	30-2171	TR 2SA733P		
Q501	30-2078	TR 2SD330		
Q502	30-2090-2	TR BC546B N 200MA 65V		
Q503	30-2337-1	TR BC337-25 500MA 45V		
INTEGRATED CIRCUITS				
IC101	30-3488	IC AM FM IF SYSTEM LA1266		
IC201	30-3506	IC MPX SYSTEM LA3400 22P		
IC301	30-3149	IC FM PRESCALLER TD6104P 7P		
IC302	30-3148	IC SYNTHESIZER TC9137BP		
IC303	30-3150	IC DISPLAY DRIVER TD6301P		
IC401	30-3051	IC METER DRIVER BA656		
IC402	30-3069	IC DUAL OP RC4558		
MISCELLANEOUS				
IFT001	29-3111	IFT FM 119AC-7BR-BP119Y		
IFT101	29-3190	IFT FM IF DET L16-400-1182		
IFT102	29-3189	COIL AM RF		
IFT103	29-3109	IFT AM OSC 7BR-BP119Y		
IFT104	29-3169	IFT AM 7MCS-MP257N		
IFT105	29-3221	ANTI BIROY FILTER		
CF101-CF103	29-3027-1	CF FM SFE10.7MA8		
CF104	29-3154	CF AM SFZ450F		
CF105	29-3123	CER FILTER BFU450K2		
CR201	29-3212	CERAMIC RESONATOR CSB456F11		

MISCELLANEOUS		
CX301	30-4004	XTAL 7.2MHZ
L001	29-1292	COIL VARI 23PF +-6% 100MHZ
L002	29-1101*B	COIL VARI 33PF +-6% 100MHZ
L003	29-1101-1	COIL VARI 33PF +-6% 100MHZ
L004	29-1167	COIL VARI 43PF +-6% 100MHZ
L005	CP0910RS2R2K	COIL PEAKING RS 2.2UH +-10%
L006	CP1011RL150K	COIL PEAKING RL 15UH +-10%
	31-3003	FLTUBE DISPLAY FIP7AM8S
	31-1221	SW TOUCH EVQ-PYR12K
SW301	31-1260-1	SW SLIDE SSB022NA02-FL
SW501	31-1311	SW PUSH SUF12AE054-FL
SW201	31-1325	SW PUSH SUF21AE001-FL
	30-1085	LED GN LT3231G/X-253PG
	30-1149	LED RD LN222RP
	30-1328	LED RD 2X5MM SP6201DK-D
	12-2110*A	RCA JACK
	12-1033*A	RCA TO RCA CONNECTOR
	14-1027	FM ANT T TYPE
	29-5023	AN ANT COIL
	14-5049*A	PW CORD STP-2 #18 PLUG W/P
	29-2179-1	XFMR PW EI-48 120V CSA
	29-2179-5	XFMR PW EI-48 115/230V DNSF
	32-2003	FUSE HOLDER PAN 32MM FH-032
	32-2012	FUSE HOLDER PAN 20MM
	32-12000W	FUSE 6.32MM ULCSA SLOW 200MA
	32-11000S	FUSE 5X20MM SEMKO SLOW 100MA
	12-2228	AC INLET
	31-1380	SW VOLTAGE SELECTOR
	14-5064	PW CORD 2X0.75SQMM PLUG DNSF

MECHANICAL PARTS LIST

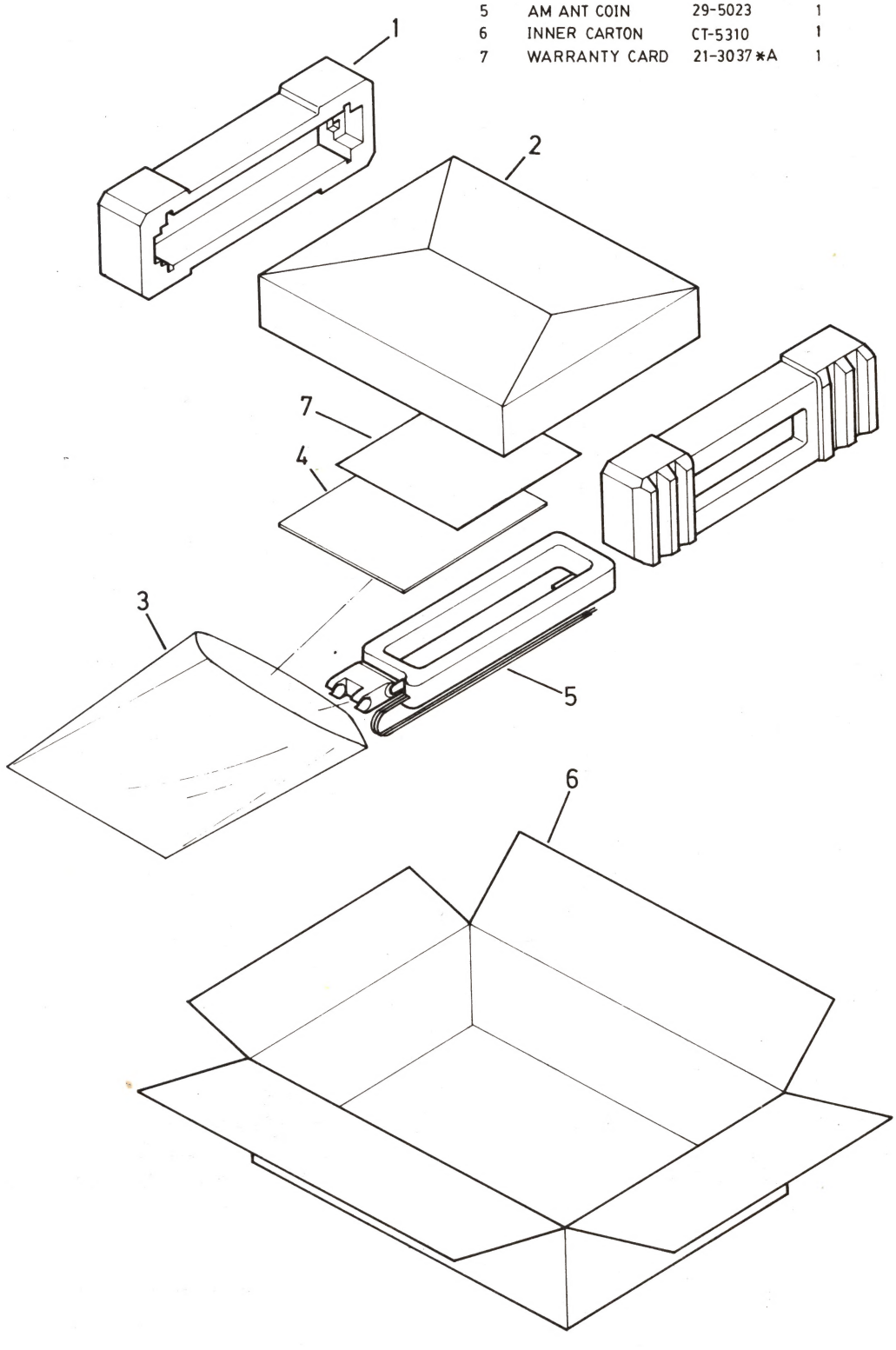
ITEM	DESCRIPTION	PART NO.	Q'TY
1	FRONT PANEL	11-8445	1
2	ACRYLIC WINDOW	11-8451	1
3	PUSH KNOB BLACK	12-3232	6
4	UP & DOWN BUTTON	12-3233	2
5	SEARCH BUTTON	13-3234	1
6	PUSH KNOB BUTTON	12-3232-1	1
7	AUX PNAEL	11-8444	1
8	BUSHING	12-7042	1
9	PUSH KNOB	12-3193	1
10	SHIELD	11-9161	1
11	PW SW CONNECTOR	12-7044	1
12	SUPPORTE FOR LED	13-7018*B	1
13	LED	30-1149	1
14	2P SOCKET	CN03-SR2502-092	1
15	LED	30-1085	1
16	sP SOCKET	CN02-SR2502-002	1
17	LED	30-1112	1
18	SPRING	12-5036	10
19	BUSHING FOR KNOB	28-1065	10
20	FRONT CHASSIS	11-6250	1
21	BKT FOR PANEL	11-2480	1
22	AUX CHASSIS R	11-6159*B	1
23	CENTER CHASSIS	11-6171	1
24	SW	31-1325	1
25	SW	31-1257	1
26	BKT FOR PW SW	11-2454	1
27	X'FMR	29-2179-1	1
28	CHASSIS LEFT	11-6158*E	1
29	RIVET	15-2061	6
30	BACK PANEL	11-8446-1	1
31	FUSH HOLDER	32-2005	1
32	SPRING WASHER	A3.3G5.5SC0.7	1
33	LUG	11-3033	1
34	RETAINER A FOR AM LOOP	28-2114	1
35	RETAINER B FOR AM LOOP	28-2113	1
36	CON. NUT	12-1032	1
37	CABINT	50-1004-1	1
38	BOTTOM CHASSIS	11-6179-2	1
39	RUBBER FEET	28-1029	4
40	RETAINER	28-2090	6
41	PUSH SW KNOB	12-3T08	2
42	BUSHING	12-7033*A	1
43	SCREW	S2E03±I08SL-2	3
44	SPECIAL SCREW	15-2062	2
45	SPECIAL SCREW	15-2069	4
46	SCREW	S1B2.6±I04SL-2	4
47	SCREW	15-2049	2
48	SCREW	S2I03±I06SL-2	7
49	SPRING WASHER	A04G07SL01	7
50	SPECIAL SCREW	15-2075	4
51	SPECIAL SCREW	15-2063	4
52	SCREW	S1E03±I08SL-2	1
53	SCREW	S2B03±I06SL-2	20
54	SCREW	S2B03±I08SL-2	2
55	SCREW	S1B03±I06SL-2	4
56	SCREW	S5B03±I06SZ-2	1

ASSEMBLY DIAGRAM



PACKING DIAGRAM

ITEM	DESCRIPTION	PART NO.	Q'TY
1	POLYLONE	34-1044*A	2
2	POLY PAPER	26-0005*B	1
3	POLY BAG MANUAL	26-2434*A	1
4	OWNER'S MANUAL	21-4161	1
5	AM ANT COIN	29-5023	1
6	INNER CARTON	CT-5310	1
7	WARRANTY CARD	21-3037*A	1



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